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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,163	12/11/2003	Laurence Richard Penn	1111-22	5953
7590	03/07/2005		EXAMINER	
John S. Egbert Harrison & Egbert 7th Floor 412 Main Street Houston, TX 77002			LAZO, THOMAS E	
			ART UNIT	PAPER NUMBER
			3745	

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/733,163	Applicant(s) PENN, LAURENCE RICHARD	
	Examiner Thomas E. Lazo	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 19-23 is/are rejected.
- 7) ☒ Claim(s) 5-18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

In paragraph [0015], line 1, "s" should be --spool--.

Appropriate correction is required.

Claim Objections

Claim 1 is objected to because of the following informalities:

In claim 1, line 8, "operation" should be --operating--. Appropriate correction is required.

Claims 19-23 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The references to the figures and the language "according to Claim [#], substantially as herein described" provides no limitation within the claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 19-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that they fail to point out what is included or excluded by the claim language. These claims are omnibus type claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 and 19-21 and 23, as far as they are definite, are rejected under 35 U.S.C. 102(b) as being anticipated by Demers et al. (4,162,750). Demers et al. discloses a metering device with an elongate chamber 1, a shuttle 2 contained within the chamber 1, the shuttle 2 having a portion which is a substantially sealing sliding fit within the chamber 1, the shuttle 2 being movable axially between an initial position and a second a second position within the chamber 1, each end of the chamber 1 defining fluid flow means through which fluid may enter and leave the chamber, and valve means 4 adapted to control the flow of fluid to and from the chamber 1 such that, during successive cycles of operating the metering device, fluid is being supplied to one end of the chamber 1 causing the shuttle 2 to move from the initial position at the one end of the chamber to the second position at the other end of the chamber thus ejecting a predetermined volume of fluid from the chamber, and subsequently fluid is supplied to the other end of the chamber causing the shuttle to move back from the second position to the initial position again ejecting a predetermined quantity of fluid from the chamber 1, the valving means

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comprising a spool valve 4 having a spool 25a sealingly slidable (by gasket 37) within a bore, the spool valve 4 being associated with means to drive the spool 5 between two alternate positions in response to the shuttle 2 reaching the initial position or the second position, the spool 25a, in one position creating a fluid flow path for pressurized liquid from a fluid flow inlet duct 49 to the fluid flow means at one end of the chamber 1, and also creating a fluid flow path from the fluid flow means at the other end of the chamber 1 to a fluid flow outlet duct 49, and in a second position creating a fluid flow path for pressurized liquid from a fluid flow inlet duct 49 to the fluid flow means at the other end of the chamber 1, and also creating a fluid flow path from the fluid flow means at the one end of the chamber 1 to the fluid flow outlet duct 49, wherein the spool 25a is moved by a motor arrangement 5, the motor arrangement 5 being controlled by a control unit (electrical circuit) in response to a signal (switch 7 shutting) generated in response to the shuttle 2 reaching the initial position or the second position.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Demers et al., as applied to claim 2 above, in view of Powers (4,830,230). Demers et al. discloses all of the claimed subject matter further including in figure 8 two shuttle rods each extending beyond the chamber, there being a respective movement limiting member located adjacent each rod, contact

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being established between a member connected to the rod and a respective movement limiting member when the shuttle reaches the initial position and the second position to generate said signal, wherein the movement limiting members are adjustably positioned. See Demers et al. col. 2, lines 24-33. Demers et al. does not disclose contact being established between the rod and the limiting member.

Powers teaches for a shuttle with two shuttle rods extending beyond a chamber and a signal generation member located adjacent each rod and that there is contact between the rod and the respective signal generation member to generate a signal for the purposes of controlling a directional control valve. See Powers col. 4, lines 56-68

Since Demers et al. and Powers both involve reciprocating shuttles with shuttle rods to generate signals, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the contact mechanism of Demers et al., based on the teachings of Powers, to have contact established between the rod and the limiting member for the purposes of controlling the spool valve.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Demers et al. and Powers, as applied to claim 3 above. The modified shuttle assembly of Demers et al. discloses all of the claimed subject matter except for each movement limiting member being electrically conductive, the shuttle and shuttle rods being electrically conductive, and the element defining the chamber contained in the shuttle being electrically conductive, wherein the arrangement is such that when a shuttle rod contacts a movement limiting element, an electric circuit associated with the control device is completed.

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Since the applicant has not disclosed that these elements being electrically conductive solves any stated problem or is for any particular purpose above the fact that completes an electric circuit and it appears that the elements of Demers et al. would perform equally well by being electrically conductive as claimed by applicant, it would have been an obvious matter of engineering expedience to further modify the shuttle of Demers et al. by making each movement limiting member electrically conductive, the shuttle and shuttle rods electrically conductive, and the element defining the chamber contained in the shuttle electrically conductive, wherein the arrangement is such that when a shuttle rod contacts a movement limiting element, an electric circuit associated with the control device is completed for the purposes of controlling the spool valve.

Allowable Subject Matter

Claims 5-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consists of six patents.

Walsh et al. (5,325,762), Goodnow (4,889,035), Nugier (3,465,686), and Chittenden (2,803,110), are cited to show reciprocating devices.

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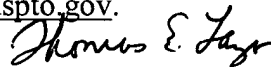
Tranovich (5,868,165) and Norton et al. (3,847,371), are cited to show a rotary spool valve and a spool valve, respectively.

Contact Information

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thomas Lazo whose telephone number is (571) 272-4818. The examiner can normally be reached on Monday-Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Edward Look, can be reached on (571) 272-4820. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the Patent Application Information Retrieval (PAIR) system. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.



Thomas E. Lazo
Primary Examiner
Art Unit 3745

TEL
March 4, 2005